Markets Power Clean Energy

THE BENEFITS OF COMPETITION

BY WILLIAM MASSEY

William Massey
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OUR NATION FACES A PRESSING NEED FOR significant new investment to meet electricity demand. Other critical challenges include the climate threat posed by carbon emissions and a global economy that is driving up the cost of steel, copper, cement and other raw materials necessary to build new infrastructure.

Meeting these challenges will be expensive. Over the next two decades, we will have to spend nearly $1 trillion for generation, transmission and distribution just to meet growing demand. Depending on the cost of a carbon mitigation policy, that price tag could soar to more than $1.5 trillion. We cannot afford a business-as-usual approach, and we would only repeat past mistakes if we simply imposed all these costs on captive utility customers.

Competitive electricity markets are meeting these challenges now in innovative and cost-effective ways. As Congress considers renewable generation and demand response – key elements in the climate change policies – regional competitive electricity markets lead the way in developing both. Rules and protocols of the organized competitive markets foster the entry of renewable resources. Hour-ahead and day-ahead markets across a broad region accommodate the variable nature of renewable generators while providing clear price signals that allow those resources to sell energy at a fair price. As a result, about 73 percent of wind generation has located within competitive markets even though those areas represent only about 44 percent of all U.S. wind energy potential. Renewable resources generate about 9 percent of the energy in competitive markets and, even more promising for the future, now make up over 40 percent of the generation queued up for interconnection to the grid.

Competitive markets also are providing a solid foundation for the growth of demand response programs. Clear price signals allow system operators and consumers to measure the value of demand response and conservation. And competitive markets are increasingly empowering consumers and new demand response service providers by allowing demand response to bid and be paid the same as generators for keeping supply and demand in balance. Over 23,000 megawatts of demand response are now available in the organized competitive markets, which is equivalent to about 25 large power plants. This means improved reliability and lower prices while requiring fewer plants to be built.

Our valuable financial and environmental resources are used more efficiently in electricity markets. The competitive pressures of electricity markets force generators to build the most efficient plants and to operate and maintain their plants at the lowest possible cost. Since the inception of those markets, heat rates have gone down and plant availability rates have gone up. Overall, generating plants in competitive markets have improved operating efficiencies at a higher rate than those in regulated markets.

The competitive markets have resulted in environmentally beneficial new capacity. For example, high efficiency combined cycle units represent most of the new construction within the New York ISO; they will offset less efficient and less environmentally friendly units. And in New England, estimates indicate the move to more efficient gas-fired generators reduced annual carbon dioxide emissions by 6 percent, nitrogen oxide emissions by 32 percent, and sulfur oxide emissions by 48 percent from 2001 to 2004.

Finally, it is critically important to note that in competitive electricity markets, investors rather than consumers bear the investment risk, as is the case in all other markets for goods and services in the United States. From 1996 to 2004, independent generators developed about 74 percent of all U.S. generating plants. With a potential $1.5 trillion price tag looming for our electricity infrastructure needs, including the costs of carbon controls, it is far better public policy to put the risk of bad decisions on investors who can best bear that risk. The market will discipline investment decisions while protecting consumers from investment risk.

As Congress moves to promote a market-based system for controlling carbon emissions, now is certainly not the time to turn our backs on the innovation, efficiency, renewable potential and risk-shifting features of competitive electricity markets, particularly as they are already helping to reduce carbon emissions. We need more competition, not less.

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